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# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Ecological Services  
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In Reply Refer To:  
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2011 SEP 28 A 11:57  
SAN DIEGO REGIONAL  
WATER QUALITY  
CONTROL BOARD

Mr. Vincente Rodriguez  
Regional Water Quality Control Board  
9174 Sky Park Court, Suite 100  
San Diego, California 92123

Subject: Comments on the Draft Environmental Impact Report Shipyard Sediment Remediation Project, San Diego Bay, California State Clearinghouse No. 2009111098

Dear Mr. Rodriguez:

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced draft Environmental Impact Report (DEIR), dated June 16, 2011. The public review period for the DEIR ended on August 1, 2011, and on August 2, 2011, we contacted RWQCB staff to indicate that we would be submitting our comments after the published deadline. The comments provided in this letter represent our concerns about the proposed project's potential impacts on sensitive biological resources.

The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, inter-jurisdictional freshwater fish, endangered animals and plants occurring in the United States, and Service lands/facilities, which include the San Diego Bay National Wildlife Refuge (SDBNWR). The Service is also responsible for administering the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*).

Near the Shipyard Sediment Site, resources of concern for the Service are primarily avian species that feed and/or nest in or near shallow water estuarine habitats, and the aquatic biota that constitute their diet. These include numerous species of fish-eating birds that nest in dense colonies nearby and feed around San Diego Bay, one of which is the Federal and State endangered California least tern (*Sterna antillarum browni*). Other species of interest include waterfowl, shorebirds, seabirds, and marsh birds that occur in great numbers as they stop to feed and/or over-winter in San Diego Bay as part of migrations along the Pacific Flyway. Many of the latter rely heavily on aquatic invertebrates for their nutrition. Service concerns about aquatic biota include preservation of populations sufficient to support nutritional needs of listed and migratory birds, and to ensure that site-related contaminants are not present at unsafe levels in the diet of trust resources.

## Background

The proposed project is to clean up contaminated sediments from the Shipyard Sediment Site (Site) located on the central eastern shore of San Diego Bay. In addition to dredging, the proposed project requires landside sites where sediments will be stockpiled, dewatered and treated with cement-based reagent to accelerate drying and bind the sediments. Once processed, contaminated sediments will be transported to an upland disposal facility, or placed in a confined disposal facility to be constructed in San Diego Bay. The cleanup is in response to the Tentative Cleanup and Abatement Order (CAO) No. R9-2011-0001, issued on September 15, 2010, by the San Diego Regional Water Quality Control Board (SDRWQCB). The CAO presented findings that shipyard sediments pose an unacceptable risk to aquatic-dependent wildlife receptors of concern, including; California least tern, California brown pelican (*Pelecanus occidentalis californicus*), Western grebe (*Aechmophorus occidentalis*), Surf scoter (*Melanitta perspicillata*), and East Pacific green turtle (*Chelonia mydas agassizii*). The CAO also presented findings that elevated levels of pollutants present in the marine sediment at the Site impair human health beneficial uses designated for San Diego Bay, including; contact water recreation, non-contact water recreation, shellfish harvesting, and commercial and sport fishing.

The sediments in question have elevated levels of numerous contaminants, including but not limited to metals (arsenic, cadmium, copper, lead, mercury and zinc), high molecular weight polynuclear aromatic hydrocarbons (HPAHs), polychlorinated biphenyls (PCBs) and tributyltin (TBT). Contaminant levels measured in site sediments exceed literature-based thresholds for toxicity to benthic invertebrates. In addition, the structure of the benthic community in site sediments shows signs of impairment, and site sediments are toxic to benthic invertebrates in laboratory tests. There is also evidence that site-related contaminants are entering and accumulating in the tissues of aquatic food web organisms, specifically bivalves and fish. The portion of San Diego Bay shoreline that includes the Site is listed on the Clean Water Act section 303(d) List of Water Quality Limited Segments for elevated levels of copper, mercury, zinc, PAHs and PCBs in sediments. In addition, all of San Diego Bay is on the 303(d) list of impaired water bodies for PCB levels measured in fish.

Metals, HPAHs, PCBs and TBT in sediment pose risks of toxicity to directly exposed benthic invertebrates, which is evident from benthic community studies and toxicity tests. They also pose risk of toxicity to vegetation and bottom-dwelling fish that are in direct contact with sediment and consume contaminated benthic organisms. Benthic organisms are a source of dietary exposure to fish and aquatic-dependent wildlife to certain sediment-borne contaminants that enter and accumulate in food web organisms for both carnivores (e.g., mercury and PCBs accumulated by invertebrates and forage fish) and herbivores (e.g., metals accumulated by vegetation).

The DEIR describes the Site as subtidal soft-bottom habitat (vegetated and unvegetated), open water with vertical bulkhead walls and dock structures. Consequently, within the project area aquatic-dependent wildlife at risk of increased exposure and impacts from site-related contaminants include: diving and dabbling birds, such as surf scoters that consume benthic

organisms; Western grebe that consume demersal fish; seabirds such as the California least tern that forage on small fish in the area; and East Pacific green turtles that consume benthic invertebrates and vegetation.

Comments

We offer the following comments on the DEIR to assist the RWQCB and project applicant(s) in avoiding and minimizing potential impacts to biological resources from the proposed project:

1. The Service concurs with the conclusion in the CAO that contaminated sediment at the Site adversely affects aquatic-dependent wildlife, and human health-based designated beneficial uses for San Diego Bay. Consequently, alternatives for leaving the contaminated sediment in place are not recommended. Leaving sediments in place will result in a continuation of contaminant-related impairments and wildlife risks at the Site. In addition, sediment-borne contaminants from the Site may migrate offsite through sediment transport processes and the movement of mobile biota with site-related contaminants in their tissues. While contaminant levels and associated risks are most elevated at the Site, site-related contaminants may contribute to elevated levels of exposure and potential impacts on fish and wildlife resources and designated beneficial uses in other parts of San Diego Bay. If left in place, contaminated sediments from the Site are a potential ongoing source of contaminants and associated impairments in San Diego Bay as a whole.
2. The proposed cleanup will leave behind sediments with levels of contaminants that are lower than currently exist, but are still elevated relative to other parts of San Diego Bay and could still pose a risk to aquatic and aquatic-dependent natural resources. The Service requests that post removal sampling and analyses be conducted in the project area to both (1) confirm that goals have been met, and (2) to assess risk posed to natural resources of San Diego Bay by residual levels of contamination.
3. The process of dredging may result in re-suspension and subsequent offsite migration of contaminated material. Measures to prevent offsite migration of sediment are described in the Section 3.6.1. These measures entail the use of silt curtains which will be monitored to ensure they are maintained in a working condition. We recommend that water outside the silt curtains be monitored, using total suspended solids (TSS) as an indicator for silt curtain performance, at various depths throughout the water column. The DEIR indicates that "*Where feasible and applicable, the floating silt curtains shall be anchored and deployed from the surface of the water to just above the substrate. If necessary, silt curtains with tidal flaps may be installed to facilitate curtain deployment in areas of higher flow.*" Water movement associated with tidal exchange and current often limits silt curtain deployment to the top few feet of the water column. It would be helpful for the DEIR to provide further details regarding the feasibility of silt curtain deployment from the water surface to just above the substrate. Section 4.3.4.1 discusses Potentially Significant Effects, including the potential for silt curtains to rip, but does not discuss the potential for contaminated materials to migrate at depths below the silt curtain. We recommend that the document

discuss the potential for contaminated sediment to migrate from the Site below the silt curtain in this section.

4. A number of potential staging and dewatering areas are being considered for use, including proposed Staging Area 5 at the 24th Street Marine Terminal and adjacent parking lots. The DEIR indicates that no sensitive receptors have been identified within 0.25 mile of Staging Area 5 (page 4.3-6), however, as outlined in the "Biological Resources" section of the DEIR, this staging area borders salt marsh, mudflat, and upland habitat within the Sweetwater Marsh Unit of the San Diego Bay National Wildlife Refuge (SDBNWR). The SDBNWR lies less than 0.25 mile from Staging Area 5, attracts many species of migratory birds, and provides nesting, resting and foraging habitat for both migratory and resident avian species including the California least tern, the light-footed clapper rail (*Rallus longirostris levipes*), western snowy plover (*Charadrius alexandrinus nivosus*), and Belding's savannah sparrow (*Passerculus sandwichensis beldingi*). Also, the "D Street Fill" to the south of Staging Area 5 is a California least tern nesting site and designated critical habitat for the western snowy plover. The DEIR should identify the close proximity of the SDNWR and "D Steet Fill" to the Staging Area 5 on page 4.4-9, which identifies sensitive land uses within the vicinity of proposed construction activities.

Stockpiling of materials at Staging Area 5 may attract birds, including western gulls (*Larus occidentalis*), to potentially contaminated debris and dead biota in the dredged sediment. Western gulls are opportunistic, and prey on vertebrates, including least tern chicks. An increase in the local abundance of western gulls and other opportunistic predators attracted to Staging Area 5 could indirectly affect least terns, if birds attracted to the site also increase their foraging activity over the adjacent least tern nesting colony. If Staging Area 5 is used, we recommend that material be stockpiled as far as possible from the SDBNWR as proposed in Mitigation Measure 4.5.10 (page 4.5-60), and that Staging Area 5 be used only outside the California least tern breeding season. Use of Staging Area 5 only outside the least tern nesting season will avoid the potential for indirect effects associated with changes in local nest predator abundance.

We also recommend monitoring for foraging activity by birds at Staging Area 5, and deterrence of foraging activity if birds are detected on site. Measures to prevent offsite migration of contaminated material during the staging and dewatering phase are described in the DEIR Section 3.6.2. Because of proximity to SDBNWR marshes, measures to prevent offsite migration of contaminated material from Staging Area 5 are especially important, and should include consideration of wind transport to nearby marsh habitat. If Staging Area 5 is selected, further analysis of the potential effects to federally listed species will be necessary, as discussed on page 4.5-56.

5. Potential contaminant-related impacts associated with the final disposition of the dredged material depends on where the material is placed and how it is contained. Alternatives, such as Alternative 4, that consider beneficial uses of the dredged material may result in the creation of habitat that attracts biota to known or potentially contaminated material.

Beneficial reuse of dredged material is not recommended, unless contaminant concentrations in material to which biota may be exposed (e.g., the biologically active zone) are below levels of concern.

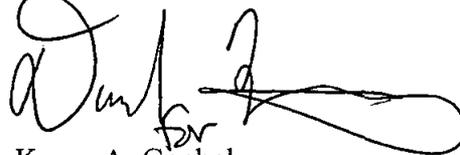
6. The discussion on the Contaminants of Concern (COCs) (Section 4.3-2) is focused on human health risk, and effects of COCs on human health. As indicated in the CAO, the COCs for human health are also the COCs for ecological impacts and risks. Because of where they live and/or feeding habits, aquatic biota and aquatic-dependent wildlife generally experience greater levels of exposure to sediment and waterborne contaminants than humans. Consequently, threshold concentrations of COCs in sediment for adverse effects in aquatic biota and aquatic-dependent wildlife are generally lower than threshold concentrations for adverse effects in humans. Adverse effects associated with the individual COCs depend on the chemical and the exposed species, making a detailed discussion in the DEIR of potential effects unfeasible. However, please provide a general note in Section 4.3-2 that the types of adverse effects are contaminant- and species-specific, and they range from lethality to sublethal effects such as poor growth, reduced reproduction, developmental effects (e.g., embryo lethality or malformations), and behavioral effects (e.g., nest attentiveness and mating behaviors in birds and predator avoidance by fish).
7. Alternative 3 (DEIR, page 5-17) includes disposal of the contaminated sediments dredged from the Site into a confined disposal facility (CFD) at Convair Lagoon, in San Diego Bay. Convair Lagoon was previously capped with clean sediments under another CAO from the SDRWQCB. Impacts to eelgrass by the previous capping project were mitigated by onsite eelgrass restoration. Alternative 3 would result in permanent loss of intertidal mudflat and shallow water habitat in north central San Diego Bay, which has already lost most of these habitats due to shoreline stabilization and dredging. This alternative would also result in the elimination of the onsite eelgrass mitigation. Because of the historic loss, impacts to intertidal mudflat and shallow water habitat at Convair Lagoon should be mitigated in north central San Diego Bay. In addition, impacts to existing mitigation sites are generally prohibited, and if unavoidable we typically recommend a minimum 5:1 mitigation ratio. The general area of north central San Diego Bay, including Convair Lagoon, also appears to be of relative importance to the California least tern for foraging during the breeding season, based on presence of shallow water habitat in proximity to a nesting colony, and California least tern foraging studies (Baird 1997). We are not aware of any potential mitigation sites within north central San Diego Bay. For these reasons, the Service does not consider Convair Lagoon a reasonable candidate as a CDF.
9. Two scheduling options for completion of the remedial action are considered in Section 3.6 (Project Characteristics). The Service recommends the first scheduling option, in which dredging operations would occur for 7 months of the year and would cease from April through August during the California least tern breeding season. This option will reduce the potential for dredging-related reduction in prey availability (associated with turbidity),

and potential for least tern uptake of released contaminants. It will also reduce our concerns regarding staging materials at proposed Staging Area 5.

10. Section 4.5.2.1 summarizes relevant Federal regulations, including the Act. We recommend slight edits of the section to address the following: The definition of "harm" should reflect the clarification provided in the Federal Register on November 8, 1999 (64 FR 215), which defines harm as "any act which actually kills or injures fish or wildlife, and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife."

We appreciate the opportunity to comment on the DEIR. For questions regarding this letter, please contact Sandy Vissman or Katie Zeeman at (760) 431-9440.

Sincerely,

A handwritten signature in black ink, appearing to read 'Karen A. Goebel', with a long horizontal flourish extending to the right.

Karen A. Goebel  
Assistant Field Supervisor

#### Literature Cited

Baird, P.H. 1997. Foraging of the California least tern in San Diego Bay, California, 1993-1996. Final Report. California State University, Long Beach, 90840. 58 pp.